

**Snohomish County Traffic Worksheet and Traffic Study Requirements
for Developments in the City of Bothell**

Snohomish County government, through an interlocal agreement (ILA) with the City of Bothell, may request traffic mitigation measures from any new development in the city that impacts roads in the unincorporated county. The City will impose the requested mitigation to the extent that the City determines that the mitigation is reasonably related to the impacts of the development. To determine the impacts, and to determine reasonable mitigation measures, the City of Bothell requires a traffic study from any development in the city that may have impacts on county roads. This 'traffic study' may be as simple as completing sections one and two of the county traffic worksheet below, or having a professional traffic engineer conduct a formal traffic study consistent with the requirements in section three below.

- If a development generates less than fifty peak-hour trips and the applicant chooses Option A for mitigation payment (standard payment by percent of county impact fee), then the applicant will generally only have to fill out the first two sections of this traffic worksheet and complete a mitigation offer (see section four).
- However, if a development generates more than fifty peak-hour trips, or if the applicant chooses Option B for mitigation payment (comprehensive impact analysis), then the applicant will have to fill out the first section of this worksheet, complete a separate traffic study consistent with the requirements in section three, and complete a mitigation offer (see Section Four).
- Applicants should submit all documents *to the City* as part of their initial submittal.
- Traffic study requirements for impacts on county roads are based on the County's traffic mitigation ordinance (Chapter 30.66B) and the city/county ILA. At the end of this document find references to the county contacts and county web site (sources for many of the documents related to traffic mitigation).
- Following review of the documents submitted, the County may request supplemental information and analysis as necessary to determine the impacts of the development in accordance with the city/county ILA. The City will require the proposed development to submit the supplemental information and analysis to the extent that the City determines that it is necessary to determine the impacts of the development.

Section One (1) Worksheet General Information

1. Name of Proposed Development _____

City Development File Number (if known)_____

2. Name, Address and Phone Number of Applicant_____

3. Development Site Address_____

4. Is it a residential or commercial development?_____

5. Description of Development (size and specific type)_____

6. How many new vehicle trips are expected to be generated by the proposed development? (For many common types of developments this information can be provided by the city or the county. For more complex developments trip generation may have to be determined under section three below)

_____ AM Peak Hour_____ PM Peak Hour_____ Average Daily Trips (ADT)

7. Proportionate Share Impact Mitigation: All applicants have two options in determining the amount of their traffic mitigation payment:

_____ For determining the amount based on a percentage of the county fee go to section two.

_____ For determining the amount based on a comprehensive traffic study go to section three.

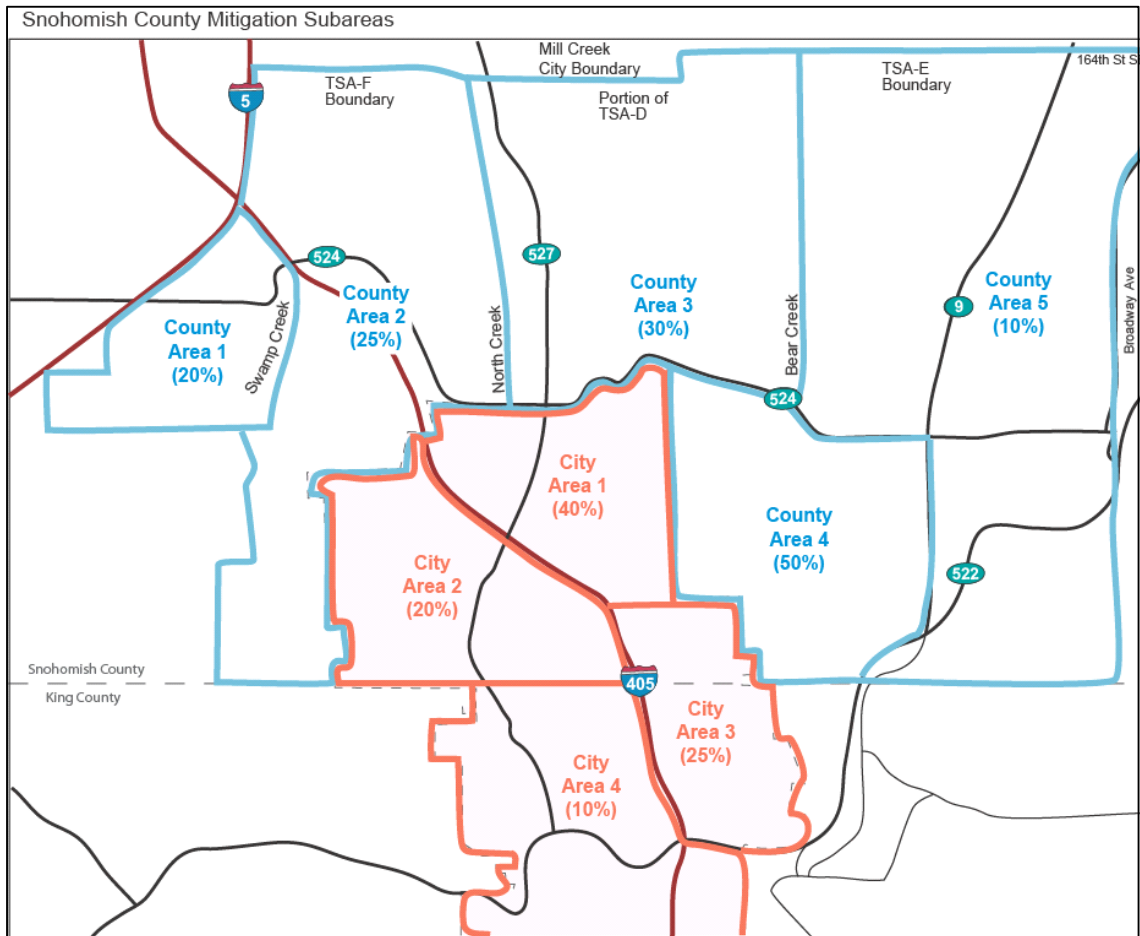
Section Two (2) Proportionate Share Determined by Percentage of County Impact Fee

2(a) Calculation of Payment Amount

1. Standard default estimated percentage of trips impacting the City streets based on subareas (See below) _____ % or 2. Other Percentage: (Note: See author’s qualifications in section three below.) Estimated percentage of trips impacting county roads from attached trip distribution: _____ %

Table One: Descriptions of City Subareas

Sub-Area ID#	Descriptions	Percentages
City Area 1	South of SR 524, North/East of I-405, North of 233 rd St SE	40%
City Area 2	South/West of I-405, North of County Line	20%
City Area 3	East of I-405, South of 233 rd St SE, North of SR 522	25%
City Area 4	West of I-405, West of 124 th Ave NE (to the south of SR 522), South of County Line	10%



3. Development New Average Daily Trip Generation (ADT) _____

4. Type of Development (Residential or Commercial) _____

5. County Commercial Fee Rate \$ _____ 6. County Residential Fee Rate \$ _____

(Note: Consistent with county code and the ILA, developments pay the rate in effect at the time of their submittal. As of 2/1/06 the rates were \$196 for commercial developments and \$230 for residential developments. Through ordinance, the County Council can change these rates at any time, so consult with the County or look at Snohomish County Code 30.66B.330 to find the latest fee rates.)

7. Calculation of Proportionate Share Impact Mitigation

$$\frac{\text{\#1 or \#2 above: \% of trips}}{\text{\% of trips}} \times \frac{\text{\#3 above: ADT}}{\text{ADT}} \times \frac{\text{\#5 or \#6 above: Fee Rate}}{\text{Fee Rate}} = \$ \text{proportionate share mitigating payment}$$

2(b) Determining whether or not an additional traffic study is necessary

Will the development generate more than 50 peak-hour trips *or* are there other impacts that need to be addressed (e.g., level of service, safety, or access and circulation)

_____ No. Skip section three and go to section four.

_____ Yes. Read the introduction to section three and skip to section 3(b).

Section Three (3) Traffic Study Requirements

Introduction: This section outlines requirements for traffic studies for impacts on County roads. If an applicant chooses (or is required) to complete a traffic study, then it should be submitted along with this worksheet and a mitigation offer. (Note on Author’s Qualifications: A traffic study under this section must be conducted by an engineer licensed to practice in the state of Washington with special training and experience in traffic engineering and, preferably, membership in the institute of transportation engineers. For individuals/firms not on the City’s approved list, the developer will provide, with the traffic study, the credentials of the individual or firm performing the traffic study certifying compliance with these qualifications.)

3(a) Proportionate share impact mitigation based on comprehensive traffic study

1. Development’s Trip Generation and Distribution. Determine the PM peak-hour trip generation and distribution for the development consistent with Section 3(b) below.
2. Impacted Improvements. Determine which of the road sections with planned improvements in the county’s impact fee cost basis (Transportation Needs Report Appendix D) are impacted by three or more development-generated *directional* PM peak hour trips (PM PHT).
3. Current Counts. For each impacted improvement, provide current traffic counts to determine the PM PHT.
4. Reserve Capacity. Determine “reserve capacity” for each impacted improvement by subtracting the current PM PHT from the maximum service volume (MSV) for the existing facility. Reserve capacity is set to zero if current PM PHT exceeds the MSV. For MSVs see County DPW Rule 4224.
5. New Capacity. New capacity is the incremental increase in PHT that could be accommodated with the planned improvement. Determine the new capacity of each impacted improvement by subtracting the current MSV from the future MSV after the improvement.
6. Chargeable Capacity. For each impacted improvement, add the reserve capacity to the new capacity.
7. Final Adjusted Cost. Find the cost of each impacted improvement and make any adjustments used by the County for tax credits (see Transportation Needs Report Appendix D).
8. Capacity Cost per Peak-Hour Trip. For each impacted improvement, determine the capacity cost per PM PHT by dividing the final adjusted improvement cost by the chargeable capacity.
9. Traffic Impacts. From step one above, take the *total* number of PM PHT (in both directions) impacting each planned improvement.
10. Proportionate Share. For each impacted improvement, determine the proportionate share impact mitigation by multiplying the capacity cost per peak-hour trip by the number of PM PHT impacting the improvement.

3(b) Trip Generation and AM and PM Peak Hour Trip Distribution and Assignment

Calculate AM, PM and Daily trip generation consistent with the ITE Trip Generation Handbook and Snohomish County Public Works Rule 4220. Determine the trip distribution and assignments consistent with the County’s document titled “Format for Trip Distributions”(available at County web site, see below).

- Within the developments transportation service area (TSA) the distributions will be carried out to each key intersection at which the approach or departure volumes on any leg have three (3) or more peak hour trips. Get the most current list of key intersections on the web site described below. Trips should be distributed onto the road system as it is expected to be in six years.
- The distribution should be a schematic map showing the broad distributions of trips in terms of percentages on different roads. Show all City boundaries.
- The assignment should be a schematic map with the impacted key intersections identified by ID# and turning movements for each shown in separate diagrams on the same page or on different pages. The assignment should also be presented in tabular form listing each intersection by intersection ID#, and the number of trips at each movement.

3(c) Additional Analysis for Developments Generating More Than Fifty (50) Peak Hour Trips

For large developments (i.e., those generating more than 50 peak-hour trips), the County may request mitigation for impacts on the level of service of County roads, documented safety locations (the County calls such locations “inadequate road conditions” or “IRCs”), and access or circulation. The traffic study requirements below are intended to disclose impacts. Based on this information the County may request through the City that the applicant provide additional information showing possible mitigation measures. If any off-site improvements were needed for mitigation the County would work with the applicant to determine requirements for right-of-way, construction plans, right-of-way use permits, construction/maintenance bonds, and other issues.

Impacts on Level of Service (LOS) of County Arterials

Contact Snohomish County Public Works for the most current list of arterial units in arrears and critical arterial units. Identify any arterial units in arrears or critical arterial units impacted by fifty (50) or more directional peak-hour trips.

Impacts on Inadequate Road Conditions

Contact Snohomish County Public Works for a list of the current IRCs. Identify any IRCs impacted by ten (10) or more peak-hour trips. Note: Unlike LOS impacts in which at least 50 or more peak hour trips have to be added in one direction to require disclosure (e.g., 50 westbound), for IRCs, any ten peak hour trips added to IRC locations are considered an impact for which disclosure is necessary (e.g., 6 westbound plus 4 eastbound).

Impacts on Access or Circulation

The County may request improvements to existing roads to provide safe and efficient access and/or circulation. In some instances, the County may request provisions for future County roads identified in the Comprehensive Plan or in Small Area Transportation Studies. If so, the County will request specific additional information through the City.

Section Four (4) Traffic Mitigation Offer to Snohomish County

The applicant should complete a traffic mitigation offer to Snohomish County that summarizes the mitigation identified in the county traffic worksheet and any additional traffic study. This will facilitate timely review of the development and processing of the application. The form to use for the mitigation offer is titled “Traffic Mitigation Offer to Snohomish County.” This form is typically provided to all applicants along with this traffic study checklist. In addition, copies are available from the county contacts or the Snohomish County web site shown below.

Additional Information

County Web Site

Snohomish County Public Works has a web site with many documents related to traffic studies and mitigation requirements for developers. From the Snohomish County Home Page go to:

[Departments/Public Works/Divisions/TES/ProgramPlanning/3066B](#)

County Contacts

- Deb Werdal, Snohomish County DPW Traffic, 3000 Rockefeller M/S 607, Everett WA 98201, (425) 388-3184, debra.werdal@co.snohomish.wa.us
- Maria Schmidt, Snohomish County DPW Program Planning, 3000 Rockefeller M/S 607, Everett WA 98201, (425) 388-3099, maria.schmidt@co.snohomish.wa.us

